REMARKS

35 USC 103 (A)

Claims 13-15 and 22-27 are rejected under 35 USC 103(a) as being unpatentable over Chung (US Patent 6,399,178) in view of Calhoun et al. (US Patent 5,275,856) and Wasulko (US Patent 5,049,434). The Applicant respectfully disagrees.

Claim 13 recites "a method for coupling an IC to a supporting surface comprising: providing an IC; providing a supporting surface to which the IC is to be mechanically and electrically bonded; providing a pre-form assembly comprising a base layer and a sacrificial assembly, the base layer comprising a thermosetting material or a thermoplastic material and wire or solder paste through conductors and the sacrificial assembly comprising a sacrificial layer and a release coating, wherein the release coating is located between the sacrificial layer and the base layer; applying the pre-form assembly to either the IC or supporting surface; removing at least part of the sacrificial assembly; sandwiching the base layer between the IC and the supporting surface; and curing the base layer."

Chung teaches an electronic device that comprises one or more electronic components, including flip-chip semiconductor devices, chip resistors, capacitors and inductors by using an adhesive underfill bonding between the electronic component and the substrate. However, the rigid adhesive underfill is not a preform that comprises a base layer that comprises a thermosetting material or a thermoplastic material and wire or solder paste through conductors, and as mentioned earlier the rigid adhesive underfill does not have a sacrificial assembly that comprises a sacrificial layer with a release coating, wherein the release coating is located between the base layer and the sacrificial layer, as currently recited in claim 13 of the present application. Given that the claims presented in the present application are not apparatus claims but are instead method claims, the Examiner cannot properly use the final product as proof of obviousness. Furthermore, as the Examiner points out in Paper No. 7, page 2 – Chung teaches that an adhesive preform film or sheet of thermosetting adhesive for bonding electronic components is dried or B-staged to facilitate handling and lamination to a device or substrate. Chung does not teach or suggest to one of ordinary

skill in the art – whether alone or in combination with Calhoun - that a pre-form assembly can be prepared comprising a base layer and a sacrificial assembly, wherein the sacrificial assembly comprises a sacrificial layer and a release coating and wherein the release coating is located between the sacrificial layer and the base layer, and wherein the base layer comprising a thermosetting material or a thermoplastic material and wire or solder paste through conductors.

Calhoun et al. (Calhoun) teaches electrically conductive adhesive tapes comprising at least one carrier web having a low-adhesion face bearing thereon an adhesive layer having substantially uniform thickness, said tape having a plurality of perforations, each perforation containing a plurality of electrically conductive particles in contact with the adhesive layer. However, the electrically conductive adhesive tapes are not sacrificial assemblies that comprise a sacrificial layer with a release coating, wherein the release coating is located between the base layer and the sacrificial layer, as currently recited in claim 13 of the present application. Given that the claims presented in the present application are not apparatus claims but are instead method claims, the Examiner cannot properly use the final product as proof of obviousness. Calhoun does not teach or suggest to one of ordinary skill in the art – whether alone or in combination with Chung - that a pre-form assembly can be prepared comprising a base layer and a sacrificial assembly, wherein the sacrificial assembly comprises a sacrificial layer and a release coating and wherein the release coating is located between the sacrificial layer and the base layer, and wherein the base layer comprising a thermosetting material or a thermoplastic material and wire or solder paste through conductors.

Wasulko teaches a pre-patterned device substrate device-attach transfer tape which allows a one step mounting of adhesive patterns on a device substrate in the desired configuration for later mount of surface mounted devices thereon. Given that previously presented arguments clearly shows that the method in Chung is not the method in the present application, the teaching of Wasulko would not apply in conjunction with Chung, Calhoun or both to give the method in the present pending claims. Therefore, based on the arguments presented herein, independent claim 13 is allowable as being patentable over Chung in view of Calhoun and Wasulko. Furthermore, claims 14-15 and 22-29 (claims 28 and 29 being added claims herein) are also patentable by virtue of their dependency on claim 13.

REQUEST FOR TELECONFERENCE

The Applicant, through the undersigned Attorney-of-Record respectfully requests a teleconference with the Examiner to resolve any remaining issues of patentability, so that this application may proceed to allowance as soon as possible. The undersigned Attorney-of-Record can be reached at 714-830-0622.

REQUEST FOR ALLOWANCE

Claims 13-15 and 22-29 are pending in this application, and the Applicant respectfully requests that the Examiner reconsider all of the claims in light of the arguments presented and allow all current and pending claims.

Respectfully submitted,

Bingham McCutchen, LLP

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By: Sandra Thompson

Sandra P. Thompson, PhD, Esq.
Reg. No. 46,264
E-mail: sandra.thompson@bingham.com
Direct Line: 714-830-0622

ATTORNEYS FOR APPLICANT(S):

Plaza Tower
600 Anton Boulevard, 18th Floor
Costa Mesa, CA 92626
Tel: (714) 830-0622
Fax: (714) 830-0722